Adversarial multi-agent path finding is a graph problem. In several vertices of the graph, mobile agents are distributed, which are divided into two teams: attackers and defenders. Each attacker is assigned one target vertex in the graph. The goal of the attackers is to occupy the assigned target vertices, while the goal of the defenders is to prevent the attackers from reaching their objectives. Both teams alternately perform one move according to the selected algorithm. In one move, all agents are allowed to move along the edge of the graph to the neighboring free vertex or they can stay at the current vertex. The aim of this work is to implement both several existing algorithms for the team of defenders and attackers, as well as several new algorithms and extensions for the team of defenders. We will then experimentally compare these algorithms in the created environment.